

Title (en)  
A QUBIT APPARATUS AND A QUBIT SYSTEM

Title (de)  
QUBIT-VORRICHTUNG UND QUBIT-SYSTEM

Title (fr)  
APPAREIL ET SYSTÈME À BITS QUANTIQUES

Publication  
**EP 3574455 B1 20240306 (EN)**

Application  
**EP 18702576 A 20180126**

Priority  
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Abstract (en)  
[origin: WO2018139928A1] A transmon qubit comprising a plate capacitor comprising a first plate (202) and a second plate (203) wherein the first plate is disposed opposite to at least a part of the second plate, wherein the first plate and the second plate are connected via a nonlinear inductance element (304), and a capacitance (205) formed between the first plate and the second plate, wherein the first plate and the second plate are configured to form a vacuum gap capacitor.

IPC 8 full level  
**G06N 10/40** (2022.01)

CPC (source: EP US)  
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Citation (examination)  
• WENNER J ET AL: "Surface loss simulations of superconducting coplanar waveguide resonators", ARXIV.ORG, CORNELL UNIVERSITY LIBRARY, 201 OLIN LIBRARY CORNELL UNIVERSITY ITHACA, NY 14853, 23 July 2011 (2011-07-23), XP080517243, DOI: 10.1063/1.3637047  
• M. H. DEVORET ET AL: "Superconducting Circuits for Quantum Information: An Outlook", SCIENCE, vol. 339, no. 6124, 7 March 2013 (2013-03-07), US, pages 1169 - 1173, XP055430188, ISSN: 0036-8075, DOI: 10.1126/science.1231298

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
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**NL 2018050057 W 20180126**; CN 201880016003 A 20180126; EP 18702576 A 20180126; NL 2018253 A 20170127; US 201816480713 A 20180126